

A.4 Performance Measurement Linkages with Budget, Cost Accounting, Human Resources, Information Technology Planning, Capital Planning and Program Evaluation

Performance Measurement Linkages with Budget

One of the greatest challenges of implementing the GPRA in a public health program is responding to the requirements of demonstrating an outcome focus on one hand and better linkages to funding (and hence, costs) on the other. These are difficult and in some cases impossible goals to mutually accomplish. The IHS has integrated the use of process, impact and a few outcome indicators but because many health outcomes cannot be realized in a one-year plan, we have predominantly focused on activities that have an evidenced-based association with positive health outcomes over time (impact).

To attempt to enhance short-term detailed cost accounting as well as discipline specific outcome assessment capability would require the reprogramming of a significant proportion of resources away from patient care into administrative infrastructure. Such an effort would run against current trends and existing priorities. We contend given these realities, our plan meets the requirements and intent of the GPRA and adequately strengthens the connection between showing how health care funding is annually prioritized to the problems of greatest concern of our consumers. Health outcomes (i.e., mortality and morbidity) are well articulated annually in our publication *Trends in Indian Health*, but which present data that are two to three years old because of delays in the Nations data system infrastructure.

The IHS has elected to keep general reference to funding levels in the plan and built estimated accomplishment around the request funding level. We can identify which requested funding enhancements are generally linked to supporting specific indicators in some cases. While the linkage would be relatively clear and direct in the case of public health nursing or dental care related indicators, it would get more complex with the diabetes-related indicators and extremely vague in the case of consumer and employee satisfaction related indicators. Applying a linear single path manufacturing accounting model to many health problems and management issues in a comprehensive public health program such as the IHS is not feasible.

Similarly, while performance targets for indicators addressing facilities construction are linked to funding levels in a linear way, this is often not the case for indicators addressing health care services when viewed through a one-year timeframe. Our ability to recruit additional health care providers and having the needed clinical space available to utilize them efficiently may not be realized in a

single year. In some cases, investments in the supportive infrastructure are the highest priority for long-term effectiveness but will do nothing in the short-run to increase access to services.

Another important fact that should be considered in reviewing FY 2002 performance indicators and their targets and the FY 2000 performance results is that the AI/AN population increases over two percent annually. Thus, service capacity must be increased over two percent just to remain at the same level of coverage each year for the indicators that set a target for the percent of the population covered.

We have selected an aggregation approach largely based on the way our programs are managed and have selected four functional areas for the aggregation of the 24 budget categories identified in the IHS "Detail of Change Table": 1.) Treatment, 2.) Prevention, 3.) Capital Programming/Infrastructure, and 4.) Consultation, Partnerships, Core Functions, and Advocacy.

While this approach may appear to be an overly simplistic "lumping" of categories, it is important to realize that there is no aggregation or disaggregation that allows mutually exclusive activities linked to mutually exclusive health problems. For a more detailed discussion of these issues, see the *Program Aggregation* section on page 37 of this document.

Cost Accounting

Beginning in FY 1997, the IHS contracted with the Mitretek Systems to analyze technical alternatives for IHS cost reporting/cost accounting. This provided a detailed analysis of technical alternatives and a cost benefit and trade off analysis of alternatives. The results have been provided to a steering committee to support strategic decision-making regarding the implementation of cost reporting and cost accounting at IHS. This system is necessary to assist IHS leadership to maximize the utility of available resources by being cost effective and ensuring that patient care can be provided to its customers.

In August of FY 1999 the steering committee met during to review, revise, and expand the cost center structure of the agency. All the current 95 cost center specifications were reviewed for content and current applications. The workgroup recommended that some of the current cost centers be deleted in future years. Several new cost centers were recommended for development. These reflect current technology, terminology and healthcare practices that will further help to delineate the agency's costs. During FY 2000 activities included the implementation of 15 new "cost centers" to improve capturing cost by functions, and sponsored 1 of 2 national training on cost principles for staff at service units, areas and headquarters. The effort also included completing "cost reports" at 30 facilities and 12 Area Offices to be used for Medicare/Medicaid rate negotiation. Five additional sites were selected to complete first-year practice cost reports. The IHS also reviewed the Veterans Administration Hospital financial cost accounting system in Albuquerque, NM, for evaluation and possible adoption by IHS.

Human Resources

The IHS is committed to human resource development as an essential component of performance planning and performance management. Historically, we have consistently invested in long and short-term training in the clinical, public health, and management/leadership areas to assure capable providers and public health leaders. In recent years we have reduce these investments to in order to support other priorities. The effects of these reductions in training are undoubtedly multiple but perhaps most evident in growing staff retention difficulties. That these two problems

are related was confirmed in surveys of employees leaving the IHS, who indicated that a lack of training opportunities was a significant determinant in their decision to leave.

Across budget categories in the requested FY 2002 IHS budget is a renewed commitment to find cost effective approaches to better meeting human resource development needs including clinical, public health, management, information technology, and teamwork. Through our Quality of Work Life project, the IHS has attempted to align its performance goals with its human resource management efforts in several ways. One, IHS has began a process by which future executives are identified and trained to take over top leadership positions one they become available. Primarily, the use of candidate development programs at all levels is the process that we will be using. Two, there is a large push to train our present and future leadership cadre at the lower levels by offering courses like Leadership in Context which focuses on leadership behavior at all levels, and Leadership 2000 which focused on leadership behaviors at the individual contributor level. Three, we are planning to train a cadre of internal consultants/coaches to offer support and infrastructure to the change in culture that will be needed for the future of Indian health. Four, there is a major push toward flexibility in working conditions for all employees, like flexiplace, flextime, etc.

We use the Human Resource Management Index (HRMI) to determine if our Human resource program is meeting employee and management expectations. The HRMI measures 14 different work related issues ranging from management culture to employee morale. The IHS HRMI score has been identified as a performance measure in beginning with the FY 2000 IHS Performance Plan (see Indicator 42 on page 117) and we expect to raise the HRMI score by at least one point each year to document performance improvement.

Information Technology Planning

The Clinger-Cohen Act (CCA) of 1996 (formerly the Information Technology Management and Reform Act), established new requirements for the information technology (IT) planning process that emphasize the management of IT resources as a "capital investment" and link these IT planning activities to budget and performance measures. The Act reflects the growing importance that the management of IT resources plays in contributing to efficient government operations. The IHS is working to integrate CCA activities in support of GPRA efforts and visa versa.

The IHS budget formulation process is the mechanism through which the portfolio of IT investments is selected and funded. Increased attention needs to be given to the economic and business justification of major investments. During the budget execution phase, an intensified management control process will be established to ensure performance goals are achieved, and that IT projects are delivered on time, within budget, and perform as intended.

The establishment of an IT investment review process as required by CCA represents a major paradigm shift in IT planning, acquisition and management. Because of this, IHS efforts have focused on educating I/T/Us in the new IT management process and providing technical guidance in the development of IT management processes consistent with their operational and management environments.

During FY 2001, the IHS will implement an agency-wide IT Investment Review Board (ITIRB) and policies and procedures on IT capital planning and investment control processes in accordance with CCA requirements and Departmental guidelines. The IHS' approach to CCA

implementation will follow the example of the Department in delegating responsibility and authority to the Area Directors for Area IT capital planning and investment control.

As part of the requirements of GPRA and the CCA, performance measurement is an essential part of effective management. CCA requires IHS to measure the contribution of IT investments to mission results. A key goal of the CCA is for agencies to have processes and information in place to ensure that IT projects are implemented at acceptable costs, within reasonable and expected time frames, and are contributing to tangible, observable improvements in mission performance. To effectively link strategic and IT capital planning along with the budget process, IT performance measurement efforts must monitor the performance of IT investments/projects to address whether they are effectively supporting the mission and programs of IHS.

Capital Planning

Capital asset planning for health care facilities construction is done in accordance with the IHS Health Care Facilities Priority System Methodology and submitted to OMB through Circular A-11, Preparation of Budget Estimates, Section III for reporting capital assets. These issues are represented in this performance plan by the three Capital Programming/Infrastructure Indicators 34-36 beginning on page 103.

Program Evaluation

In recognition of the growing importance of evaluation in supporting the IHS Mission, Goal and GPRA performance planning, the IHS has elected to add this section addressing program evaluation for FY 2000. The IHS evaluation process seeks to include American Indians and Alaska Natives as primary stakeholders in defining the purpose, design, and execution of evaluations. Stakeholders are the users of the end product of evaluations and typically are the population or groups most likely to be affected by the evaluation findings. The IHS has worked with it stakeholders in identifying and implementing principles of responsive evaluation practice and setting evaluation priorities.

The purposes of IHS evaluation efforts are:

- to advise the Director of the IHS on policy formulation; to conduct and manage program planning, operations research, program evaluation, health services researches, legislative affairs, and program statistics
- to develop the long-range program and financial plan for the IHS in collaboration with appropriate agency staff
- to coordinate with HHS, Indian Tribes, and organizations on matters that involve planning, evaluation, research and legislation
- to develop and implement long-range goals, objectives, and priorities for all activities related to resource planning and allocation methodologies and models.

The Office of Public Health (OPH) serves as the principal advisory office to the IHS on issues of national health policy and coordinates these four evaluation functions:

- *Health Program Evaluations*--Collect and analyze information useful for assisting IHS officials in determining the need for improving existing programs or creating new programs to address health needs.

- **Policy Analysis**--Conduct analyses when a change in the IHS health service delivery system must be considered, when issues emerge in an area where no policy currently exists, or when current policies are perceived as inappropriate or ineffective.
- **Health Services Research**--Undertake analyses of the organization, financing, administration, effects, and other aspects of the IHS.
- **Special Studies and Activities**--Conduct studies and prepare special reports required by Congress in response to pending legislation or policies, often using a roundtable whenever an issue or a health problem requires immediate action and it is unclear what type of action should be taken.

The OPH meets part of the IHS evaluation needs with two major types of short-term studies: policy or program assessments and evaluation study. The policy study contributes to IHS decision-making about budget, legislation, and program modifications and includes background information to support IHS projects. Evaluation studies are carried out at the program level, or area offices, and focus on specific program goals.

Annually, OPH identifies the high-priority health care and health management issues and concerns through the submission of headquarters and area office proposals for assessment or evaluation. IHS area and associate directors submit proposals for possible areas of evaluation study. These proposals are reviewed and rated by a panel of subject-matter experts and evaluation experts and also reviewed by IHS staff for more specific concurrence with IHS strategic goals, objectives, and priority areas. The proposals are then ranked by priority and forwarded to the OPH for review and approval. The Director of the IHS reviews the final proposals and decides the respective funding levels.

Summary of Relevant Evaluations Activities

Several recent evaluation projects have significant direct and/or indirect implications for IHS performance planning and are thus summarized below:

Level of Need Funded Study Part 1: Benefit Package Costs for All Indians: This study, which is currently in draft report status, was designed to answer the question: *What would it cost to provide an equitable level of health care services to all eligible Indian people?* The research team used an actuarial analysis approach to address factors that affect the cost of providing health care benefits. The Federal Employee Health Benefits Plan was used as the benchmark for coverage and cost (i.e., premiums, co-payments, and deductibles) and adjustments were made for the population's age, health status, location, and estimated payments by other insurers (i.e., Medicare, Medicaid, and private).

The finding revealed that a health care package comparable to the Federal employee's provided to all 2.4 million AI/AN would cost \$2,980 per person for a total cost of \$7.4 billion annually. This same coverage if applied to the current 1.34 million using the IHS system would cost approximately \$4 billion with about 25% of the cost expected to come from other sources (i.e., Medicare, Medicaid, and private). Under this model, additional resources would be needed to serve all eligible AI/AN people.

Diabetes in the Native American Population: The purpose of this project is to evaluate the effects of intensive counseling and drug management on the lowering of HgA1c's hypertension

control and compliance with annual exams through a pharmacy practitioner diabetes program. The current Santa Fe Service unit (SFSU) HgA1c average is 8.3%. This is a reduction from 9.4% in 1995. It has been suggested that this reduction is due to the increased use of metformin at the SFSU. The cost of this agent for the past 2 years at SFSU alone totaled \$45,303. The estimated cost of all diabetic medication in FY 97 was \$31,750. The proposed use of another new agent troglitazone has the potential of triple this dollar amount. The project will attempt to limit these expenses by providing intensive counseling on the use of medications, reinforcing dietary and lifestyle changes and recommended by the dietician, reinforcing the use of self-blood glucose monitoring, and adjusting medication per protocol or doctors orders. The findings from this study underpin many of the strategies used in to achieve Indicators 2-5.

Evaluation of the Behavioral Risk Factor Surveillance System's Results and their Applicability to the Native Population of Anchorage: The purpose of this evaluation study is to determine the relative accuracy, validity and reliability of the Behavioral Risk Factor Surveillance System (BRPSS) risk estimates of the Anchorage Native population compared with data collected using other techniques that include (a) door-to-door household surveys, (b) key informant surveys, and (c) intercept data collection from Natives seeking primary care services in Anchorage from the Alaska Native Medical Center and the Primary Care Center.

The findings have significant implications for the most efficient and effective approaches to delivering health services and thus achieving many of the performance measures in this plan.

Evaluating the impact of primary intervention techniques on the dental caries rate in children living in southwest Alaska Native villages: The project will identify the reason why some communities in Bristol Bay have significant higher/lower caries rates in children than do other children in other Bristol Bay communities. Children aged 6-8 have been selected for the project. Since there are multiple contributing factors from caries, multiple risk factors must be reviewed to properly assess the risk for disease. The results of the project will be used to identify the factors that create high risk communities. A community model will be developed for use in allocating specific techniques including use of fluoridated water, consistent topical fluoride application, village education and support will reduce decay by an average of 2-3 surfaces per child at the end of those years.

Alaska Native Teen Tobacco Cessation Project: The purpose of the Alaska Native Teen Tobacco Cessation Project is to (1) help the youth who participate in the project to quit tobacco, 2) motivate the youth to become tobacco prevention and cessation advocates in their communities, and 3) determine the effectiveness of the cessation camp model in helping youth to quit tobacco. The utility of the study is to provide health educators, parents, teachers, community health aids, and other community health workers with information about the effectiveness of this particular approach to teen tobacco cessation.

This project will provide important information and strategies relevant to the development of Tobacco Control Centers as outlined in Indicator 30.

Assessing Substance Abuse Treatment Outcomes for Native Americans Residing on the Reservation: This study will provide a description of the severity of the participants' problems across eight domains (medical, legal, employment, social, drug use, psychological and spiritual) prior to intervention, and for up to 24 months after intervention. This description will provide the basis upon which improvements of the treatment program can be made. Areas that should be

targeted for specific populations will be identified. In addition, the study will produce a set of manuals documenting the interventions provided by Indian Rehabilitation, Inc., in a manner that will allow replication by other facilities.

Methodology for Adjusting IHS Mortality Data for Inconsistent Classification of Race-Ethnicity of American Indian and Alaska Natives Between State Death Certificates and IHS Patient Registration Records: The findings in this study indicate that on 10.9 percent of IHS Indian records matched to national death records, the race reported for the decedent was other than American Indian or Alaska Native. The percentage of records with inconsistent classification of race varied considerably among the IHS Areas. Recommendations included replicating the study using data on deaths occurring since 1988, using the adjustment factors developed in the study, and working with States to decrease inconsistent race reporting. While the significance of the study is not profound in terms of the performance indicators in this plan (i.e., the indicators are not based on State death certificates), the long-term significance in monitoring mortality disparities for the AI/AN population is critically important. The adjustments factors developed from this investigation are now being utilized in calculating AI/AN mortality rates in all the IHS publications.

Evaluation of the Indian Health Service (IHS) Adolescent Regional Treatment Centers: The principal conclusion based on this study's findings is that regional treatment centers have developed effective adolescent alcohol and substance abuse programs. The continuity of care and aftercare, however, is the biggest problem. The regional treatment centers need additional mental health staff resources, client charting improvements, and innovative ways to increase family involvement. Recommendations include improving the continuum of care to adolescent substance abusers, self-evaluation, and regional treatment center effectiveness and efficiency. This evaluation effort served as a major determinant in selecting Indicator 9 for this plan that addresses follow-up care for youths returning from regional treatment centers.

Evaluating the Effectiveness of Alcohol and Substance Abuse Services for Native American and Alaska Native Women: Phase II Final Report: This evaluation provides both qualitative and quantitative information about a group of women that has been traditionally underrepresented in research. The life conditions of women about whom information was gathered are extreme, and for many women, adverse or abusive childhood experiences and conditions have carried through to adulthood. The vast majority of women were exposed to various types of abuses--such as physical, sexual, and emotional abuse--from childhood to adulthood. Women entered treatment through a variety of ways. Those who were mandated tended to enter treatment as an alternative to incarceration. Women hear about the availability of services through the court system, word-of-mouth, or through a community or an American Indian and Alaska Native social service agency. Women in the focus groups tended to select their current alcohol and other drug treatment program over alternatives because of its focus on American Indian and Alaska Native tradition and culture. The women and staff also espoused the benefits of the family-like environment that the treatment centers promoted. The availability of women-centered, family-focused approaches to alcohol and other drug treatment is severely limited in the United States. Several barriers to services for potential participants exist. The leading obstacle for parenting women is the lack of child-care for their children while in treatment. It was strongly emphasized that a woman's recovery was dependent on three key factors: herself, her social networks, and her community.

Partially based on the findings of this evaluation, this plan includes indicators which address policies and procedures for dealing with substance abusing women (Indicator 10) and for identifying, treating and/or referring victims of family violence, abuse or neglect (Indicator 14).

Prior Trauma Care of Intoxicated Patients as a Predictor of Subsequently Fatal Injury: The IHS has funded a study that includes the preliminary data collection, crude data reporting, and initial death certificate-hospital record linkage for alcohol related fatalities. The purpose of this study is to identify intervention opportunities associated with nonfatal, alcohol-related injuries reported in IHS emergency departments and clinics that could, over time, decrease alcohol-related injury death in the Billings, Montana, Service Units. This study is providing baseline data for post-intervention comparisons by expanding the existing database about alcohol-related injuries and death. The findings are being used to identify different intervention and prevention strategies directed at decreasing alcohol-related injuries and deaths in the Billings, Montana, Service Units. Injury-control efforts include a new policy regarding referrals by emergency room treatment staff to alcohol treatment staff. Prevention of alcohol-related injuries and deaths will also include activities focused on informing youth about the relationship between alcohol consumption and high-risk behavior. The findings of this evaluation effort underpin the interventions that are being used in achieving Indicator 26 in this plan addressing the reduction of unintentional injury hospitalization rates.

Resource Requirements Methodology Update: In the early 1970's, the IHS formulated the Resource Requirements Methodology (RRM) as a management tool to provide a comprehensive, systematic, and uniform process for estimating the level of resource requirements necessary to provide basic health care to IHS customers and to assist in the allocation of non-earmarked resources. To reaffirm the purpose of the RRM, a study was conducted in 1995 to determine the validity and accuracy of the present methodology for use in today's health care environment. Preliminary findings support the need to update the current methodology to meet the future program demands of the IHS. The will consist of the following phases: (1) Update Staffing

Criteria and Modules, (2) Formulate Needs Assessment Cost Model, and (3) Needs Assessment Model Training. This methodology is critical to planning the achievement of most of the health service related indicators identified in this plan.

Development of a Health Services Research Agenda for American Indian and Alaska Native Populations: The IHS and the Agency for Health Care Policy and Research cosponsored a health services research conference as a first step in a long-term agenda-setting process to identify the most important health services research issues facing AI/AN communities and their health care systems over the next 5 to 10 years. The health services research agenda is intended to promote collaboration among American Indian or Alaska Native organizations, tribal and urban health systems, medical communities, foundations, and government agencies to increase communications and produce research information on health program services for the American Indian or Alaska Native patient. The health services research agenda is also intended to provide a forum for discussing health care reform changes that are creating new directions in the Indian health care system.

New Directions for Evaluation

The IHS is responding to dramatic changes taking place inside and outside the Government including greater involvement of tribal governments in the Indian health care system, technological innovations, the changing patterns of disease to more chronic conditions, and the transfer of many Federal programs and resources to individual States. These changes will affect the IHS evaluation strategy in the coming years. Nevertheless, the IHS remains committed to comprehensively community-based, preventive, and culturally sensitive projects that empower tribes and communities to overcome health issues. Specific research and evaluation proposals currently in process include the following topics: evaluation of the effects of medical nutrition therapy on patient outcomes among Native Americans with newly diagnosed type II diabetics, evaluation of the elders clinic at the Zuni (New Mexico) Ramah Service Unit, and the evaluation of the impact of the Northern Cheyenne End-Stage Renal Disease Prevention Project.

In addition, the Director of the IHS has increased emphasis on several areas consistent with the DHHS Strategic Plan and the priorities identified by IHS stakeholders. These activities focus on women's health, youth, traditional medicine, elder care, and establishment of working relationships with Federal and State governmental agencies and will undoubtedly affect new directions for evaluation.